#38 Appeal Brief PATENT 5/23/04

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant:	Edwards	Examiner: D. Chung	
Serial No.:	09/353,887	Group Art Unit: 2672	
Filed:	July 15, 1999	Docket: 18195.29	
Title:	GRAPHICS PROCESSOR WITH TEXTURE MEMORY ALLOCATION SYSTEM		

APPEAL BRIEF

Mail Stop Appeal Brief-Patents
Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Sir,

Pursuant to 37 C.F.R. 1.192, Applicant submits the following Appeal Brief:

REAL PARTY IN INTEREST

The real party in interest in the present application and Appeal is 3Dlabs Inc. Ltd., a corporation of Bermuda, having a place of business at Huntsville, Alabama 35824. 3Dlabs is a subsidiary of Creative Technologies, Ltd., a corporation of Singapore.

RELATED APPEALS AND INTERFERENCES

There are no related appeals or interferences.

STATUS OF CLAIMS

Claims 1, 4-13, 15-19, 21-22, 24-25, and 35-38 were rejected under 35 U.S.C. §103(a) as being obvious over Lentz (U.S. Pat. No. 5,886,705) in view of Young, et al (U.S. Pat. No. 5,831,637) and Tanaka, et al. (U.S. Pat. No.5,793,376), and further in view of Saunders, et al (U.S. Pat. No. 6,046,747) and Kobayashi, et al. (U.S. Pat. No. 5,761,401), and claims 14, 20, and 26-34 were rejected under 35 U.S.C. §103(a) as being obvious over Lentz, Young, et al. and

Tanaka, et al. in view of Saunders, et al., and further in view of Chimoto (U.S. Pat. No. 5,550,961).

STATUS OF AMENDMENTS

No amendment has been filed since the Final Rejection of the last final Office Action.

SUMMARY OF INVENTION

In summary, the invention is a graphics accelerator for processing graphical images. The graphics accelerator includes a single texture buffer and a plurality of texture processors (page 5, line 29 – page 6, line 20). Each of texture processor retrieves texture packets from the single texture buffer (page 7, lines 1-3) and each texture map associates with a texture map that is different from texture maps associated with other texture packets (page 8, lines 20-23). Each texture packet includes data relating to its associated texture map in the texture buffer (page 8, lines 16-20).

ISSUES

The following issues are presented for the Board's consideration:

1. May claims 1, 4-8, 21-22, and 24-25 be rejected under 35 U.S.C. §103(a) based upon combination of five (5) references when none of the references specifically suggest the combination?
2. May claims 26-28, 29-31, and 32-38 be rejected under 35 U.S.C. §103(a) based upon combination of four (4) references when none of the references specifically suggest the combination?
3. May claims 9-14 and 15-20 be rejected under 35 U.S.C. §103(a) based upon combination of three (3) references when none of the references specifically suggest the combination?

GROUPING OF CLAIMS

1. Claims 1, 4-8, 21-22, and 24-25 are grouped together, where the base claims, claim 1 and claim 21, are rejected by a combination of five (5) references.

2. Claims 26-28, 29-31, and 32-38 are grouped together, where the base claims, claim 26, claim 29, and 32, are rejected by a combination of four (4) references.

3. Claims 9-14 and 15-20 are grouped together, where the base claims, claim 9 and claim 15, are rejected by a combination of three (3) references.

ARGUMENT

Claim Rejections Under 35 U.S.C. §103

A. SUMMARY OF ARGUMENTS.

This section summarizes Applicant's arguments, according to the format of 37 CFR § 1.192 (c)(8)(iv). A more detailed argument and citation to authority is found below.

1. A valid teaching, suggestion, or motivation to combine the references as suggested has not been shown.

The cited references do not suggest or motivate their combination to provide functions of the invention.

2. The present claimed invention cannot be used as the motivation for combining the references.

The examiner cannot use the invention as a road map to pick and choose references to form a combination that provides all elements of the invention.

B. DETAILED ARGUMENTS AND CITATIONS TO AUTHORITY.

1. References used for rejection under 35 U.S.C. §103 must provide some suggestion for combination.

MPEP 706.02(j) states that three basic criteria must be met to establish a prima facie case of obviousness under 35 U.S.C. §103. First, there must be some suggestion or motivation, either in the references or in the knowledge generally available to one of ordinary skill in the art to combine reference teachings. Second, there must be a reasonable expectation of success. Third, the references must teach or suggest all the claim limitations.

United States Court of Appeals for Federal Circuit has also stated that "when a rejection depends on a combination of prior art references, there must be some teaching, suggestion, or motivation to combine the references." *In Re Rouffet*, 149 F. 3d 1350, 1355 (CAFC 1998). The

court further said that when combining known elements, the question is "whether there is something *in the prior art as a whole* to suggest the desirability, and thus the obviousness, of making the combination." *Id.* at 1356. (emphasis added)

In rejecting the claims, the Examiner cited six patents and one on-line dictionary, wherein the cited patents covering technologies ranging from texture memory organization to video stream data mixing and to parallel image generation. In particular, when rejecting claim 1, the Examiner admitted that Lentz (U.S. Pat. No. 5,886,705) does not teach all elements of claim 1 (Office Action of Jan. 12, 2004 (OA), page 3, ¶2). The Examiner then relied an on-line computer dictionary to interpret the buffer (OA, page 3, ¶2). The Examiner further cited Young, et al. (U.S. Pat. No. 5,831,637) for teaching of multiple texture processors and stated that the minimization of processing time as the motivation to combine Young, et al. with Lent and the on-line computer dictionary (OA, page 4, lines 1-4). The Examiner admitted that Young, et al. does not teach one single texture memory but it said that the plurality of processors retrieving data from a single texture buffer would be obvious to reduce required processing time in parallel structure (OA, page 4, lines 14-20). The Examiner cited Kobayashi, et al. (U.S. Pat. No. 5,761,401) to support this statement (OA, page 4, line 21).

The Examiner continued by admitting that Lentz does not teach texture packets identifying the location of texture maps (OA, page 5, ¶2) and cited Tanaka, et al. (U.S. Pat. No. 5,793,376) as disclosing packet data that represent the storage location of texture data/map. The Examiner did not give any reason or motivation for combing Tanaka, et al. with Lentz, the on-line computer dictionary, Young et al, and Kobayashi, et al.

The Examiner then stated that the above combination does not teach texture packets having data related to a dimensional type of its texture map (OA, page 5, ¶3). The Examiner then cited Saunders et al (U.S. Pat. No. 6,046,747) as disclosing a special bin texture call that includes a target parameter defining the dimension of the texture map (OA, page 5, ¶3). The Examiner stated "[providing an] efficient way to perform texture mapping process based on dimension type of texture data" as the motivation for combining Saunders, et al. with Lentz.

As stated above, the Examiner cited five (5) U.S. patents and one on-line computer dictionary in rejecting claim 1 as obvious under 35 U.S.C. §103. The Examiner applied the same reasoning to reject claim 21. However, the Examiner failed to distinguishably point out, in each

of five patents, the motivation and desirability to combine with features from the other four patents. The Examiner argued that all five cited references relate to texture processing and the motivation for combination would be to produce texture processing with time efficiency, properly retrieved texels and optimized hardware (OA, page 17, ¶2). The Examiner is accordingly making statements in hindsight with the guidance of the present application to combine the references. The Examiner's statement is without support from the cited references as required by MPEP 706.02(j) and *In Re Rouffet*.

Regarding claim 26, the Examiner admitted that Lentz does not disclose a texture packet having data relating to the dimensional type of its texture map, but the Examiner said that Saunders, et al. (U.S. Pat. No. 6,046,747) discloses such element (OA, page 14, ¶4). The Examiner further admitted that the combination of Lentz, Tanaka, et al., and Saunders, et al. does not disclose converting a multi-dimensional texture map into a one dimensional map, and the Examiner stated that Chimoto discloses this element (OA, page 15, ¶2). The Examiner cited four (4) patents to render claim 26 obvious and applied the same reason to claims 29 and 32 without pointing out where in these references the combination is suggested.

Regarding claim 9, the Examiner admitted that Lentz does not disclose a texture packet identifying the location of a texture map, and the Examiner stated that Tanaka, et al. discloses a packet data with storage location information (OA, page 8, ¶2). The Examiner further admitted that Lentz does not disclose a texture packet with data relating to the dimensional type of its texture map, and the Examiner, again, stated Saunders, et al. discloses such element (OA, page 8, ¶3). The Examiner cited three (3) patents to render claim 26 obvious and applied the same reason to claim 15 without pointing out where in these references the combination is suggested.

2. The Passages Cited by the Examiner Do Not Support the Examiner's Conclusions.

However, assuming, that arguendo, the Examiner's statements for claims 1 are admissible under MPEP 706.02(j) or *In Re Rouffet*, the passages cited by the Examiner do not support the Examiner's conclusion regarding the combination. In particular, the Examiner cited column 3, liens 51-54 in Kobayashi, et al. as providing motivation for multiple processing units accessing a single texture buffer, therefore combining Kobayashi, et al. with Lentz and Tanaka, et al. However, a closer and complete reading of the entire paragraph (col. 3, lines 49-60) reveals that

Kobayashi, et al. does not advocate using of a single texture buffer. Kobayashi, et al. states that "because a high speed, large capacity texture buffer is required, providing an equal number of texture buffers and parallel processing units greatly increases the scale of the apparatus for image generation" (col. 3, lines 54-57). Kobayashi, et al. further states that "using a single texture buffer requires a complex communications bus and an arbiter, thus prohibiting an unlimited increase in the number of parallel processing units." (col. 3, lines 57-60) Kobayashi, et al. actually teaches away from the invention by recommending against using a single texture buffer. Consequently, Kobayashi, et al. would not suggest combination of itself with Lentz and Tanaka, et al.

Further, the Examiner's statement on the motivation to incorporate the teaching of Tanaka, et al. in to the teaching of Lentz is not supported by the stated purpose of Lentz. The Examiner stated that the motivation to combine Lentz and Tanaka, et al. would be to provide enhanced image data by converting the existing file format into a new improved format (OA, page 5, ¶2). However, Lentz stated its objective is to maximize the data retrieval speed (col. 3, lines 21-22), and its approach can yield greater speeds by minimizing the occurrences of memory-page changes (col. 3, lines 32-34). Lentz is not concerned with, and does not address the providence of enhanced image data. Thus, there is not intended suggestion in Lentz to motivate combination with Tanaka, et al.

3. It is Impermissible to Use the Claimed Invention as the Template for Hindsight Reconstruction.

When making a determination under 35 U.S.C. §103, it is impermissible simply to engage in a hindsight reconstruction of the claimed invention, using the applicant's structure as a template and selecting elements from references to fill the gaps. *In Re Gorman*, 933 F.2d 982 at 987 (CAFC 1991). The references themselves must provide some teaching to render the invention obvious.

As shown above, the five cited references do not in themselves motivate combination in the manner suggested by the Examiner. Further, the Examiner has not correctly shown any motivation absent of the impetus of the present invention.

It is improper to us the claimed invention as the template to select elements from the cited references to fill the gaps of the Examiner's argument in accordance with to *In Re Gorman.*

CONCLUSION

For the reasons enumerated above, Applicant believes that the Examiner's conclusion was in error and requests that all claims be allowed.

No addition fees are believed due. However, the Commissioner is hereby authorized to charge any additional fees which may be required, including any necessary extensions of time, which are hereby requested, to Deposit Account No. 50-2666.

5/18/04
Date

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CERTIFICATE OF MAILING

I hereby certify that this correspondence is being placed in the U.S. Mail and addressed to Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450 on the date written below.

Lucille Golden-Blakey — 5/18/04
Lucille Golden-Blakey — Date